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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,046	02/19/2004	Markus Henneken	ZAHFRI P441USD1	5737
20210	7590	12/20/2005	EXAMINER	
DAVIS & BUJOLD, P.L.L.C. FOURTH FLOOR 500 N. COMMERCIAL STREET MANCHESTER, NH 03101-1151			PANG, ROGER L	
			ART UNIT	PAPER NUMBER
			3681	

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/782,046

Applicant(s)

HENNEKEN ET AL.

Examiner

Roger L. Pang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 is/are allowed.
- 6) ☒ Claim(s) 9-13 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 14 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 10/129,223.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

The following action is in response to the RCE filed for application 10/782,046 on November 10, 2005.

#### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations of claim 12 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings were received on October 13, 2005. These drawings are approved.

#### ***Claim Objections***

Claim 9 is objected to because of the following informalities: on line 3, "upswitch" should be replaced with --upshift--. Appropriate correction is required.

#### ***Terminal Disclaimer***

The terminal disclaimer filed on October 13, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,773,373 has been reviewed and is accepted. The terminal disclaimer has been recorded.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. With regard to claim 12, it is never stated when the absolute kick-down switching characteristic line for the determination of the kick-down upshift point should be used, nor is there any sufficient detail that would distinguish the difference the absolute and the varying upshift point.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear how an absolute kick-down switching characteristic line could be applied to a method of adding a speed offset to said upshift point, especially since in paragraph 32 of the specification, applicant discloses that “instead of a speed offset an absolute kick-down switching characteristic line can be used.”

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Koenig. With regard to claim 9, Koenig teaches a method for optimizing a kick-down upshift point speed in a motor vehicle with an automatic transmission 14, comprising determining each kick-down upshift point as a function of at least one of a load condition DESRPM and a road inclination as represented by a gradient of one of an engine output speed and a transmission output speed. With regard to claim 10, Koenig teaches the method, comprising adding a speed offset of appropriate sign ( $ACCEL * DTME$ ) to the current upshift point as a function of an output speed gradient ( $ACCEL$  when a kick-down condition is recognized by a transmission control system of the transmission. With regard to claim 11, Koenig teaches the method, comprising storing the variation of the speed offset of appropriate sign in the transmission control system 190 in the form of a characteristic line, a separate characteristic line being stored for each upshift (Fig. 4; Fig. 3a). With regard to claim 12, Koenig teaches the method, comprising using an absolute kick-down switching characteristic line for determination of the kick-down upshift point (Fig. 2). With regard to claim 13, Koenig teaches the method, comprising determining the target gear for the next upshift when a kick-down condition is recognized and determining the transmission output speed gradient  $ACCEL$  and then calculating the speed offset ( $CACCEL * DTME$ ), the

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delay times for individual gear changes being stored for application with temperature-dependent delay times being taken into account (Fig. 4; Fig. 2).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tinschert.

With regard to claim 17, Tinschert teaches a method of kick-down upshift speed optimization in a motor vehicle with an automatic transmission as a function of road inclination, comprising the steps of: determining an output speed gradient reflecting a road inclination (Fig. 11), determining a speed offset ddkw, dependent upon the output speed gradient, applying the speed offset as an adjustment to the upshift point speed such that an engine will reach a high engine output speed at an upshift point (Col. 8. lines 57-58). Tinschert lacks the specific teaching of using the maximum engine output speed as an upshift point. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tinschert to employ a maximum engine speed as the upshift point, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. With regard to claim 18 and 20, Tinschert teaches the method, further comprising the step of further determining the output speed gradient and the speed offset based upon a vehicle load condition which is derived from one of a corresponding curve and value stored in a transmission control system (Fig. 11). With regard to

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claim 19, see rejection to claim 17 above, and Tinschert teaches altering the upshift speed according to the speed offset so that the upshift occurs at a time the engine output speed reaches the maximum engine output speed.

***Allowable Subject Matter***

Claim 15 is allowed.

Claims 14 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

1) With regard to applicant's argument on the "absolute characteristic" limitation, applicant appears to be defining the invention through the arguments, instead of an interpretation by someone of ordinary skill in the art at the time of invention of the disclosure. Applicant only mentions this limitation once in the entire specification, and that in paragraph 32:

"Alternatively, in a variant of the present invention, instead of a speed offset an absolute kick-down switching characteristic line can be used."

First, claim 12 is dependent on claim 10, which is claiming the speed offset. This already contradicts the disclosed invention. Second, if a speed offset is not used, applicant has not disclosed how an "absolute kick-down switching characteristic" is to be used. Applicant's arguments, with regard to the many different interpretations of the word "absolute," used in this context, further complicates the issue.

2) With regard to the Koenig reference, applicant argues that claim 9 of the present invention includes the steps of "determining, from an engine output speed gradient reflecting at

least one of a load condition and a road inclination, a speed offset representative of a time interval required for the engine to reach a maximum engine output speed, and applying the speed offset as an adjustment to the upshift point speed.” This is claimed in claim 1 of the parent application, which has been allowed. This has not been claimed in any of the claims of the present application.

The newest Amendment actually broadens claim 9. As currently claimed, any art disclosing a shift map with engine speed as one of the axes will read upon the entire claim. Koenig teaches this. With regard to the offset speed, Koenig may wait until an error in the engine speed at the time the shift occurs to add the offset for a subsequent shift, but this offset is added to the current upshift point, and still reads upon the present invention, as claimed.

3) With regard to the Tinschert reference, applicant argues that Tinschert lacks the explicit teaching of determining road slope from a gradient of an engine output speed, use or consider using the engine output speed gradient for any purpose, or teach of an offset speed to correct the shift point of the transmission.

Applicant has only claimed of determining an output speed gradient “reflecting a road inclination.” In Fig. 11, once an inclination is determined, a correction factor is determined from a speed gradient and inclination slope, and thereby added to the upshift characteristic (which includes engine speed output), as illustrated in Fig. 4.

It is understood that both Koenig and Tinschert do control their transmission offsets in a different manner than the present invention, however, these differences have not been distinctly claimed. Applicant’s arguments have been considered, but are not persuasive.



*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Popp, Karmel and Muller have been cited to show similar transmission shift point adjustment controls.

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. The central facsimile number is (571) 273-8300. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

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(Signature)


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roger L. Pang whose telephone number is 571-272-7096. The examiner can normally be reached on 5:30am to 4:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Roger L Pang  
Primary Examiner  
Art Unit 3681

December 15, 2005